NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET

(pursuant to NAC 445A.236)

Permittee: Wells Manufacturing/Bloomfield Industries
Division of Carrier Commercial Refrigeration, Inc.
P.O. Box 280
Verdi, Nevada 89439

Permit: NV0021849 – Renewal

Location: Wells/Bloomfield
2 Erik Circle
Verdi, Washoe County, Nevada 89439
Latitude: 39° 31' 10"N; Longitude: 119° 58' 45"W
Township 19N, Range 18E, Section 8 MDB&M

Flow: Daily maximum: 0.055 Million gallons per day (MGD)
30-day Average: 0.054 MGD

General: The Permittee, formerly Wells Manufacturing Company, has applied for a renewal of National Pollutant Discharge Elimination System (NPDES) permit NV0021849 to continue to discharge non-contact cooling water to the Truckee River via a Sierra Pacific Power Company (SPPC) hydrogeneration by-pass/overflow ditch. This permit was originally issued in September 17, 1991 and was most recently renewed in October 2000.

The Permittee produces stainless steel commercial cooking equipment including gas and electric griddles, gas and electric fryers, food warmers, toasters, waffle bakers, coffee brewers, and specialized products for food chain customers at the facility. Manufacturing operations include sheet metal forming, welding, deep drawing, punching, and assembly of products. The permitted discharge is for once-through non-contact cooling water only. Process waters are managed as a separate wastestream that is not discharged from the facility.

Water from an on-site cased spring is utilized for cooling water. The corrugated metal casing is 8 feet in diameter, approximately 24 feet deep, and covered by a locked building. Excess spring water flows from the casing, through a 10-inch pipe, to the SPPC ditch at the northern property boundary. Currently, only two welder heads and two deep draw hydraulic presses are cooled with this water. The spring is registered under Public Water Supply 773 as the source water for the Verdi Mutual Water Company. The water company is operated by the Permittee and is a non-transient/non-community water system.

Receiving Water Characteristics: The non-contact cooling water is discharged to the Truckee River via a SPPC hydrogeneration by-pass/overflow ditch. Outfall 001 is approximately 450 feet upstream of the confluence of the ditch and the river. Water quality standards for the Truckee River at Idlewild, Nevada Administrative Code (NAC) 445A.185, apply to this ditch via the tributary rule.

The beneficial uses of the Truckee River from Pyramid Lake to the state line, as designated at NAC 445A.183, are irrigation; watering of livestock; recreation involving and not involving contact with the water; industrial supply; municipal or domestic supply, or both; propagation of wildlife; and propagation of aquatic life. The aquatic life of major concern in the stream segment from the state line to Idlewild are all life stages of mountain whitefish, rainbow trout, and brown trout.

The EPA Approved Final 2004 Nevada 303(d) Impaired Waters List does not include the Truckee River from the state line to Idlewild.

Based on quarterly sampling by the Bureau of Water Quality Planning (BWQP), Truckee River at Idlewild Park meets all of the NAC 445A.185 water quality standards for beneficial uses. In 2005, the River met six of the ten monitored NAC 445A.185 annual average requirements to maintain existing higher quality (RMHQ) at Idlewild.

Parameter	RMHQ	2005 Average
pH (SU)	7.2 – 8.3	8 of 12 exceeded RMHQ
Chlorides (mg/L)	≤ 7.0[1]	7.7
Total Phosphates (mg/L)	≤ 0.05[1]	0.024
Ortho Phosphate (mg/L)≤ 0.02[1]		0.006
Total Nitrogen (mg/L)	≤ 0.3[1]	0.25
Total Dissolved Solids (mg/L)	≤ 80[1]	85
Turbidity (NTU)	≤ 6.0[1]	3.5
Fecal Coliform (No./100 ml)	≤ 50[2]	35[2]
Total Suspended Solids (mg/L)	≤ 15.0[1]	8.4
Sulfate (mg/L)	≤ 7.0[1]	8.9
Sodium-SAR	≤ 0.6	NM

Notes:

1.	Annual average.		
2.	Annual geometric mean.		
SU:	Standard units.	mg/L:	Milligrams per liter.
NTU:	Nephelometric turbidity units.	No./100 ml:	Number per 100 milliliters.
SAR:	Sodium adsorption ratio.	NM:	Not monitored.

Quantities: From January 2001 through June 2006, the discharge flow has averaged 0.0082 MGD with a maximum monthly average flow of 0.0140 MGD in the second quarter of 2005 and the first quarter of 2006. Since January 2001, the discharge total nitrogen (TN) concentration has averaged 1.35 mg/L with a maximum concentration of 4.3 mg/L in the first quarter of 2005 and a minimum value of non-detect in the third quarters of 2004 and 2005. Since January 2001, the discharge total phosphorus (TP) concentration has averaged 0.15 mg/L with a maximum concentration of 0.24 mg/L in the third quarter of 2002 and a minimum value of 0.022 mg/L in the fourth quarter of 2003. Since January 2001, the discharge total dissolved solids (TDS) concentration has averaged 153 mg/L with a maximum concentration of 290 mg/L in the first quarter of 2005 and a minimum value of 120 mg/L in the third quarter of 2005 and the second quarter of 2006.

Using the maximum monthly reported flow, 0.0140 MGD, and the average concentration of constituents of concern, TN 1.35 mg/L, TP 0.24 mg/L, and TDS 153 mg/L**,** the following quantities were calculated: TN 0.16 lbs/day, TP 0.02 lbs/day, and TDS 18 lbs/day. These TN and TP loads are well below the less than 1.0 lbs/day of the 2000 Truckee River de minimis policy for TN and TP. Since a significant portion of the Truckee River TDS TMDL has not yet been assigned to load allocations or wasteload allocations, the Division has not yet adopted a de minimis policy for TDS.

The current permit includes TN, TP, and TDS effluent discharge limitations of 0.75 lbs/day, 0.25 lbs/day, and 100 lbs/day, respectively. These discharge limitations are proposed to be retained in the draft permit.

Compliance History: Based on the Division's Compliance Database, the Permittee has had one exceedance of permit limits since the first quarter of 2002; compliance prior to January 2002 is not tracked in the database. In the third quarter of 2003, the change in pH between the influent and the effluent was greater than the effluent discharge limitation of ± 0.5 standard unit (SU), 0.89 SU. This discharge pH, 7.45 SU, was within the 7.2 SU to 8.3 SU RMHQ pH range.

Proposed Effluent Discharge Limitations: **S**amples taken in compliance with the monitoring requirements specified below shall be taken from:

i. the cooling water discharge line totalizing flow meter;
ii. the effluent discharge line downgradient of the flow meter, Outfall 001;
iii. SPPC by-pass ditch 10 feet upstream of Outfall 001;
iv. SPPC by-pass ditch 30 feet downstream of Outfall 001; and
v. the influent water from faucet identified as Test Water Sample Point.

Table 1: Discharge Limitations

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30-Day Average	Daily Maximum	Sample Location	Measurement Frequency	Sample Type
Flow, MGD	0.054	0.055[1]	i.	Continuous	Flow Meter
Copper, µg/L	Monitor & Report[2]		ii., v.	Quarterly	Discrete
pH, SU	Δ pH $\leq$ 0.5		ii., v.	Quarterly	Calculation
Total Phosphorus – P	Monitor & Report, mg/L		ii.	Quarterly	Discrete
	0.25 lb/day				Calculation
Total Nitrogen – N	Monitor & Report, mg/L		ii.	Quarterly	Discrete
	0.75 lb/day				Calculation
Total Dissolved Solids	Monitor & Report, mg/L		ii.	Quarterly	Discrete
	100 lb/day				Calculation
Temperature, °C	ΔT = 0		iii., iv.	Quarterly	Calculation
Dissolved Oxygen, mg/L	Monitor & Report		ii.	Quarterly	Discrete
Hardness, mg/L as $CaCO_3$	Monitor & Report		ii.	Quarterly	Discrete

Notes:
[1]: Weekly average.
[2]: Monitor and report influent and effluent copper concentrations and the change in copper concentration between the influent and effluent ($Cu_{in} - Cu_{eff} = \Delta Cu$).

MGD: Million gallons per day.
mg/L: Milligrams per liter.
µg/L: Micrograms per liter.
lb/day: Pounds per day.
ΔT: Temperature change.
SAR: Sodium adsorption ratio.
-N: As nitrogen.
SU: Standard units.
-P: As phosphorus.
°C: Degree Celsius.
ΔpH: pH change.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the schedule of compliance.

-Within sixty (60) days of the permit effective date, the Permittee shall submit a revised Operations and Maintenance Manual to the Division for review and approval.

Rationale for Permit Requirements: Monitoring requirements for the parameters specified in Table 1:

Discharge Limitations have been established to ensure that the receiving water, the Truckee River, is not degraded as a result of the Permittee's non-contact cooling water discharge.

Flow: In the permit renewal application form, the Permittee requested the same 30-day average, 0.054 MGD, and daily maximum, 0.055 MGD, flows as in the current permit. Since the third quarter of 1993, the maximum average quarterly flow was 0.0457 MGD in the fourth quarter of 1995. As stated in the quantity section, the discharge has averaged 0.0082 MGD over the last five years.

Since the recording flow meter is only read on a weekly basis, the 0.055 MGD daily maximum has been changed to a weekly average discharge limitation in the draft permit. The 30-day average flow limitation of the current permit has been retained.

Copper, total: Due to elevated influent total copper concentrations, first quarter 2001 through second quarter 2006 average copper influent concentration 1,310 µg/L, the intake pollutant credit policy as described at 40 CFR 132 Appendix F, the Great Lakes Water Quality Initiative Implementation Procedures, Procedure 5: Reasonable Potential to Exceed Water Quality Standards (GLI) is being utilized for this discharge. This policy has not been formally adopted by the Division.

Per the GLI, "An intake pollutant from groundwater may be considered to be from the same body of water if the permitting authority determines that the pollutant would have reached the vicinity of the outfall point of the receiving water within a reasonable period had it not been removed by the permittee, except that such a pollutant is not from the same body of water if the groundwater contains the pollutant partially or entirely due to human activity, such as industrial, commercial, or municipal operations, disposed actions, or treatment processes."

Intake pollutant credit applies to the Permittee's water supply because the spring would discharge directly to the SPPC ditch, if the Permittee did not capture the water for this non-contact cooling water use. Outfall 001 is approximately 400 feet downgradient of the spring casing overflow pipe. The following items were considered in the determination to utilize the intake credits portion of the GLI:

1) The facility withdraws 100 percent of the intake water containing the pollutant from the same body of water into which the discharge is made;
2) The facility does not contribute any additional mass of the identified intake pollutant to its wastewater;
3) The facility does not alter the identified intake pollutant chemically or physically in a manner that would cause adverse water quality impacts to occur that would not occur if the pollutants were left in-stream;
4) The facility does not increase the identified intake pollutant concentration at the point of discharge; and
5) The timing and location of the discharge would not cause adverse water quality impacts to occur that would not occur if the identified intake pollutant were left in-stream.

Monitoring for copper is required to demonstrate that the assumptions regarding intake/effluent water quality and associated intake credits are maintained throughout the permit life. The reopener clause authorizes modification or revocation and reissuance of the permit, if new information indicates changes in the conditions evaluated for allowance of the intake credit procedure.

As stated previously in this section, the total copper concentration in the influent has averaged 1,310 µg/L. Excluding a second quarter 2002 reported value of less than 10,000 µg/L, the effluent copper concentration has averaged 270 µg/L over the same time period with the effluent concentration exceeding the influent concentration only in the first quarters of 2004 and 2005.

The draft permit requires the continued monitoring of the influent and effluent copper concentrations and the calculation of the change in copper concentration between these two monitoring points.

pH: This reach of the Truckee River does not meet the NAC 445A.185 pH RMHQ, 7.2 SU – 8.3 SU. NAC 445A.185 includes a single value pH water quality standard for beneficial uses within the range of 6.5 – 9.0 SU and a maximum Δ pH $\leq$ 0.5 SU.

From the first quarter of 2001 through the second quarter of 2006, nine of the 22 quarterly influent pH values have been less than the 6.5 SU beneficial use standard. During the same time period, the discharge has had a higher effluent pH thirteen times and a lower effluent pH nine times than the influent. In two quarters, first and second 2003, the influent met the water quality standard but the effluent did not. The maximum Δ pH $\leq$ 0.5 SU standard was exceeded once, 0.89 SU in the third quarter 2003, during this time period and the average Δ pH was 0.17 SU.

To be consistent with the intake credit policy used for copper and the current permit, the effluent pH value is not limited in the draft permit; the change in pH between the influent and effluent is limited to a maximum of 0.5 SU.

Total Nitrogen as Nitrogen, Total Phosphorus as Phosphorus, and Total Dissolved Solids: Section 303 (d) (1) (C) of the Clean Water Act requires that Total Maximum Daily Loads (TMDLs) shall be established at a level necessary to implement the applicable water quality standards. In February 1994, the Final Truckee River Total Maximum Daily Loads and Waste Load Allocations was adopted by the State. The Truckee River TMDL compliance point was set at Lockwood because the majority of controllable sources are upstream from this point. TMDLs were developed for total nitrogen (TN), 1,000 pounds per day (lb/day); total phosphorus (TP), 214 lb/day; and total dissolved solids (TDS), 900,528 lb/day; and waste load allocations were assigned only to the largest discharger, the Truckee Meadows Water Reclamation Facility.

When the Truckee River TMDL was adopted, the smaller dischargers, including the Permittee, were included in the unassigned non-point source load allocation; many of the smaller dischargers were not monitoring the concentration of these constituents in their discharges. In 2000, thresholds for evaluation of the daily loading of TN and TP from small Truckee River discharges that are considered to be de minimis, less than 1.0 lb/day each, were adopted. A significant portion of the TDS TMDL has not yet been assigned to WLAs or LAs.

From the first quarter of 2001 through the second quarter of 2006, the average TN, TP, and TDS loads have been 0.10 lb/day, 0.010 lb/day, and 10 lb/day, respectively. The TN, TP, and TDS load limitations are explained in the Quantities section of this fact sheet.

The current permit does not limit the concentration of these constituents and concentration limits are not proposed in the draft permit.

Temperature: The temperature limitation, zero change in temperature (ΔT = 0°C), is based on the NAC 445A.185 RMHQ. From the first quarter of 2001 through the second quarter of 2006, there has been no reported temperature difference between the monitoring points 10 feet upstream and 30 feet downstream of the discharge point. The RMHQ standard is proposed to be retained in the draft permit.

Dissolved Oxygen: NAC 445A.185 includes a dissolved oxygen (DO) single value water quality standard for beneficial uses of greater than 6.0 mg/L November through March and greater than 5.0 mg/L April through October. In 2005, the average river DO concentration at Idlewild was 10.88 mg/L with a minimum value of 8.48 mg/L in July. From the first quarter of 2001 through the second quarter of 2006, the average DO concentration was 8.5 mg/L with a maximum value of 9.86 mg/L in the first quarter of 2004 and a minimum value of 7.33 mg/L in the second quarter of 2006.

The DO monitoring without limitation of the previous permit is proposed to be continued in the draft

permit.

Chlorides: The River exceeds the NAC 445A.185 chlorides RMHQs, 10.0 mg/L – single value and 7.0 mg/L annual average. NAC 445A.185 includes a chlorides single value water quality standard for beneficial uses of 250 mg/L.

From the first quarter of 2001 through the second quarter of 2006, the chlorides concentration in the discharge has averaged 21 mg/L with a maximum value of 73 mg/L in the first quarter of 2005. The previous permit required quarterly chlorides monitoring without discharge limitation. Due to the lack of reasonable potential to exceed 250 mg/L standard, further chlorides monitoring is not proposed in the draft permit.

Sulfate: The River exceeds the NAC 445A.185 sulfate RMHQs, 8.0 mg/L – single value and 7.0 mg/L - annual average. NAC 445A.185 includes a sulfate single value water quality standard for beneficial uses of 250 mg/L.

From the first quarter of 2001 through the second quarter of 2006, the sulfate concentration in the discharge has averaged 5.8 mg/L with a maximum value of 13 mg/L in the first quarter of 2006. In 8 of the 22 quarterly analyses during this time period, sulfate was not detected. The previous permit required quarterly sulfate monitoring without discharge limitation. Due to the lack of reasonable potential to exceed 250 mg/L standard, further sulfate monitoring is not proposed in the draft permit.

Sodium as Sodium Absorption Ratio (SAR): NAC 445A.185 includes sodium -SAR RMHQs of 0.6 - single value and 0.5 – annual average, and a beneficial use standard of 8 – annual average. The River is not monitored for sodium as SAR at Idlewild.

From the first quarter of 2001 through the second quarter of 2006, the sodium -SAR in the discharge has averaged 0.85 with a maximum value of 1.1 in the first quarter of 2005. The previous permit required quarterly sodium –SAR monitoring without discharge limitation. Due to the lack of reasonable potential to exceed the 8 annual average standard, further sodium -SAR monitoring is not proposed in the draft permit.

Total Suspended Solids (TSS): The River meets the NAC 445A.185 TSS RMHQ, 15.0 mg/L – annual average.

From the first quarter of 2001 through the second quarter of 2006, the TSS concentration in the discharge has averaged 1 mg/L with a maximum value of 2 mg/L in the third quarter of 2002 and the first quarter of 2006. In 16 of the 22 quarterly analyses during this time period, TSS was not detected. The previous permit required quarterly TSS monitoring without discharge limitation. Due to the lack of reasonable potential to exceed the 15.0 mg/L RMHQ, further TSS monitoring is not proposed in the draft permit.

Hardness as $CaCO_3$: Hardness as calcium carbonate has been added to the permit monitored parameters as monitor and report because the aquatic life standard, NAC 445A.144, for copper is a function of the hardness. Quarterly monitoring of total copper is required by the draft permit.

Proposed Determination: The Division has made the tentative determination to issue the proposed permit for a term of five (5) years.

Procedures for Public Comment: The Notice of the Division's intent to issue a permit authorizing the facility to discharge to surface waters of the State, subject to the conditions contained within the permit is being sent to the **Reno Gazette-Journal** for publication. The Notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail, time-stamped faxes, e-mails, or hand-delivered items) to the Division is 5:00

PM February 8, 2007.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted. Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Bruce Holmgren
Date: November 2006